

3753

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR:	W. Helms et al.	)	EXAMINER:	T. Walberg
SERIAL NO.:	10/520,703	)	ART UNIT:	3753
filing date:	October 31, 2003	)	DATE:	January 17, 2006
FOR:	HEAT EXCHANGER	)		

THIRD-PARTY SUBMISSION UNDER 37 CFR § (1.99 IN PUBLISHED PATENT APPLICATION SERIAL NO. 10/520,703

Mail Stop Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

The foregoing is a third party prior art submission under 37 CFR § 1.99 in connection with pending patent application serial no. 10/520,703, entitled HEAT EXCHANGER, which was published on November 17, 2005.

It is believed that radiator nos. 43 2020 GM (p.205), 43 2373 FORD (p.218), 43 2192 FORD (p.210), 43 3891 FORD (p.258), 43 2183 FORD (p.209), in the 2001 Ready Rad radiators/Ready Aire heater cores, Catalog No. 401, published 2001 by Go/Dan Industries, are relevant to patent application serial no. 10/520,703. Copies of the relevant pages of this catalog are enclosed, along with copies of the engineering drawings showing the construction of the heat exchanger headers incorporated into the radiators depicted in the catalog and sold in 2001. As such, it is requested that the United States Patent & Trademark Office enter this third party submission into the above patent application file,

of the second

01/20/2008 CCHRU1 00000024 10520703

and the Examiner consider the enclosed documents when determining patentability of the claims of pending published patent application serial no. 10/520,703.

This third party prior art submission is being timely submitted within the two (2) month deadline, i.e., January 17, 2006, from the publication date of November 17, 2005, is accompanied by the appropriate fee of \$180.00, and has been served on applicant's attorney/agent, FOLEY AND LARDNER, located at Suite 500, 3000 K Street NW, Washington, D.C. 20007, in accordance with 37 C.F.R. 1.248.

The Commissioner is hereby authorized to credit or debit our deposit account number 04-0566 for any over or under payments.

Respectfully submitted,

Peter Peterson Reg. No. 31,867

**DeLIO & PETERSON, LLC** 

121 Whitney Avenue New Haven, CT 06510-1241 (203) 787-0595 prol531\_3<sup>rd</sup>\_pty\_sub

#### **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposit below as first class mail in an envelope addressed to: Mail	ed with the United States Postal Service on the date indicated Stop, Commissioner for Patents, P.O. Box 1450,
Alexandria, VA 22313-1450	
Name: Barbara Browne Date: January 17, 2006	Signature: Sarbour Scours



# **CERTIFICATE OF SERVICE**

This hereby certifies that the foregoing THIRD PARTY SUBMISSION UNDER 37 CFR § 1.99 IN PUBLISHED PATENT APPLICATION SERIAL NO. 10/520,703 was mailed this 17<sup>th</sup> day of January 2006, in a securely sealed envelope, by first class mail, postage prepaid to:

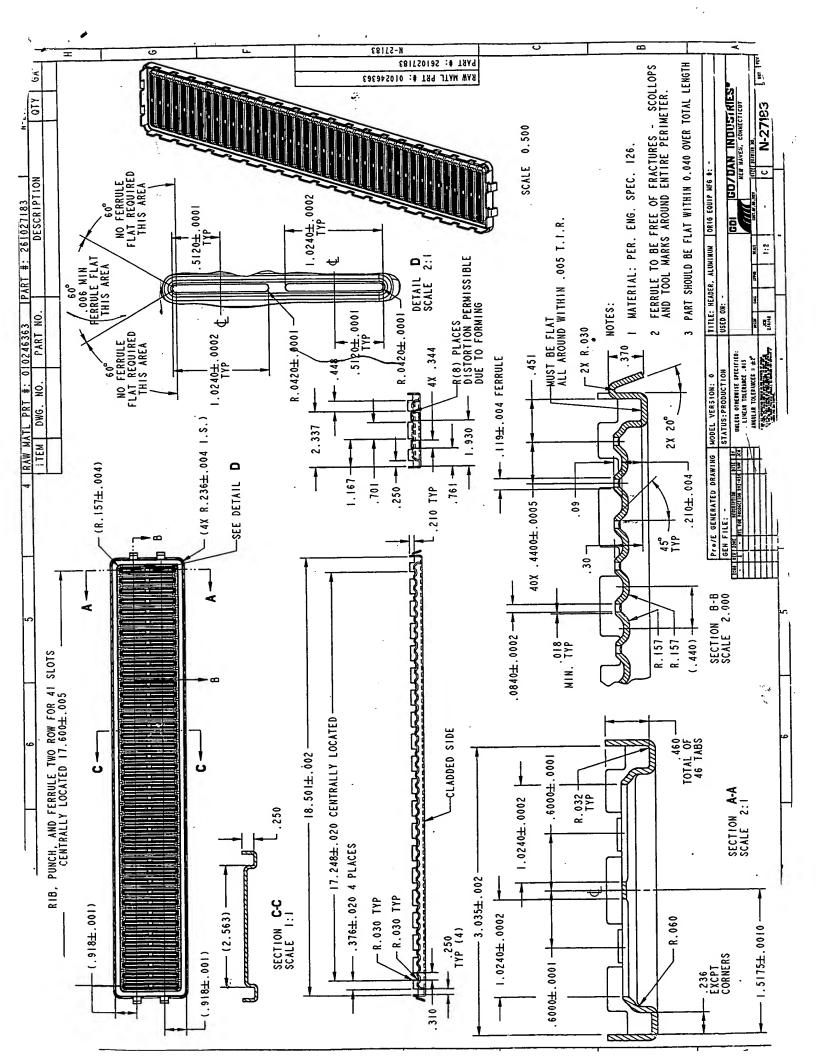
FOLEY AND LARDNER Suite 500 3000 K Street NW Washington, D.C. 20007



N - 27183

**HEADER** Used in

**RADIATOR 43 2183 FORD** 

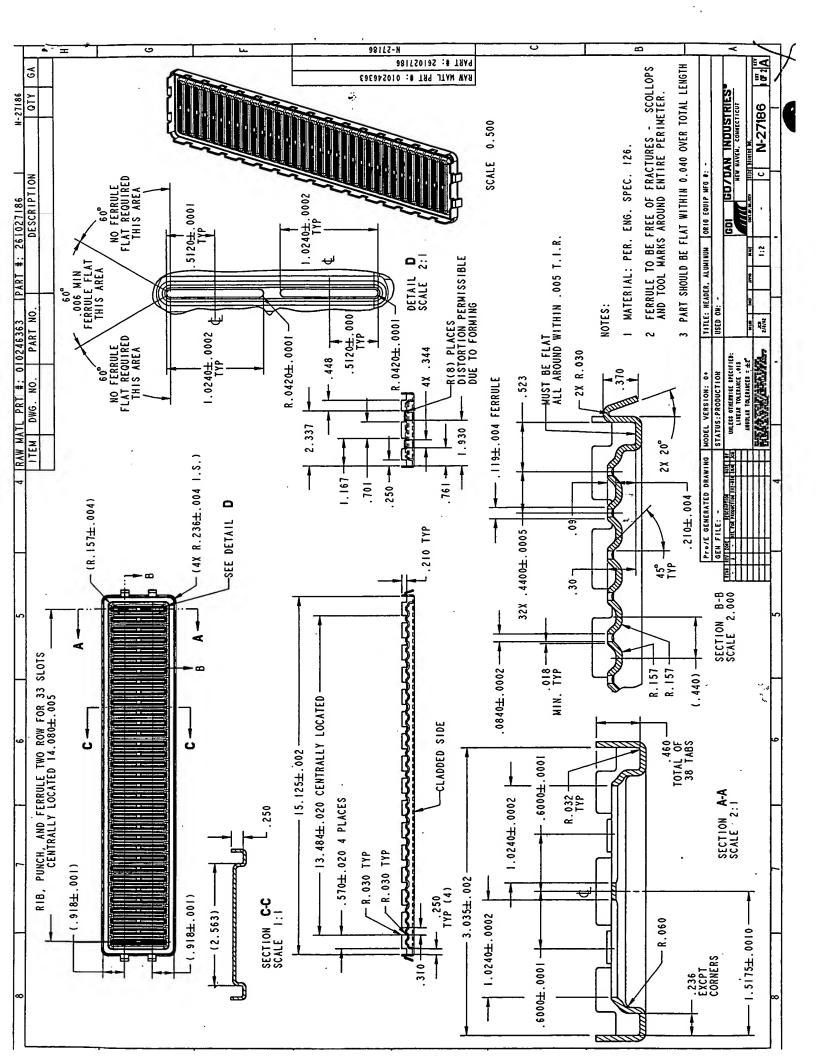




N - 27186

**HEADER** Used in

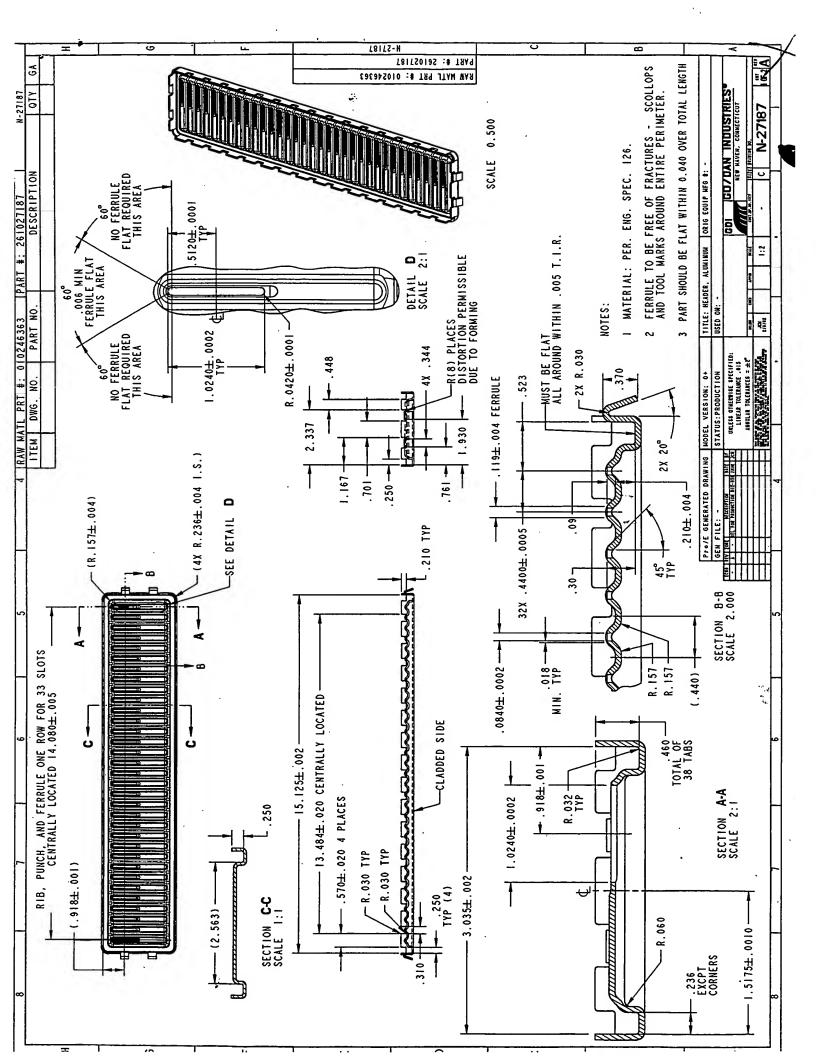
**RADIATOR 43 3891 FORD** 



N - 27187

**HEADER** Used in

**RADIATOR 43 2192 FORD** 

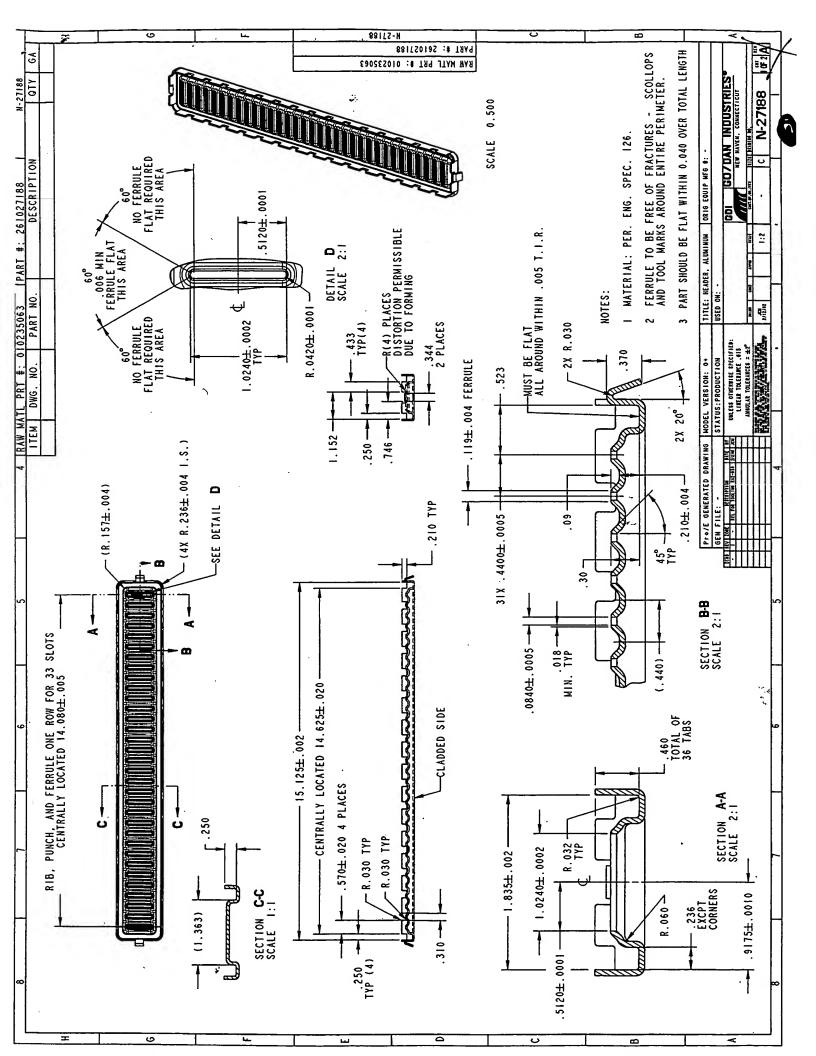




N - 27188

**HEADER** Used in

**RADIATOR 43 2192 FORD** 

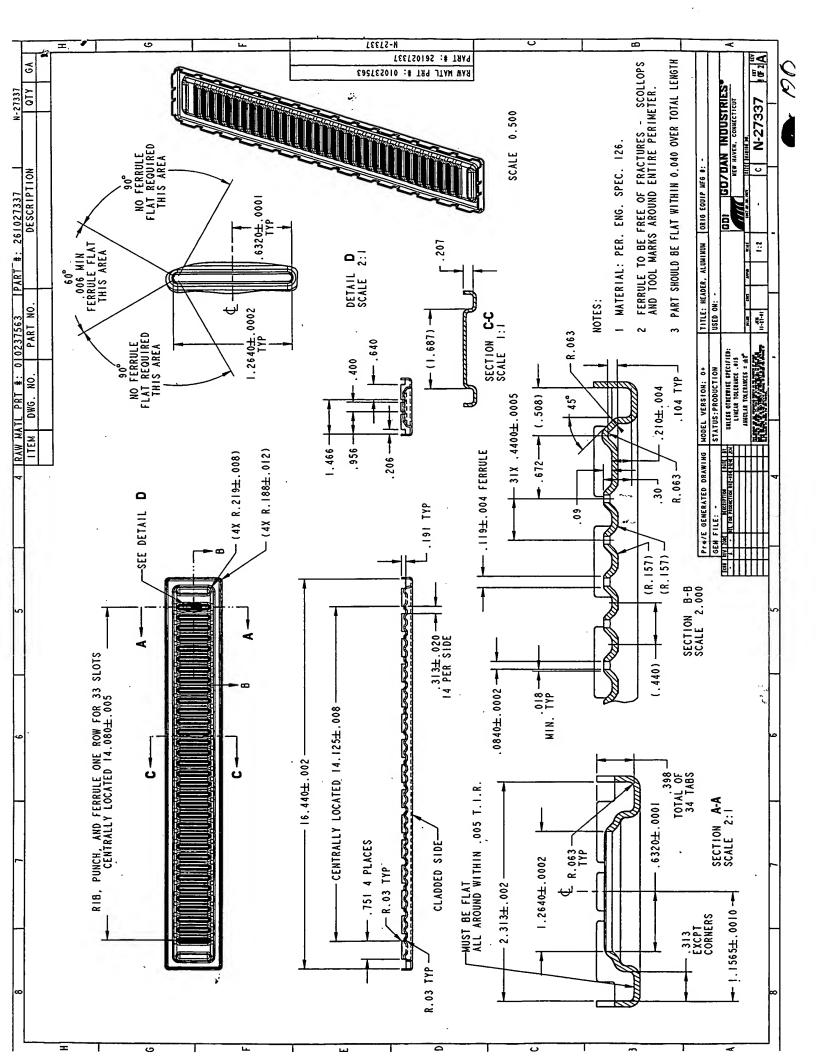




N - 27337

**HEADER** Used in

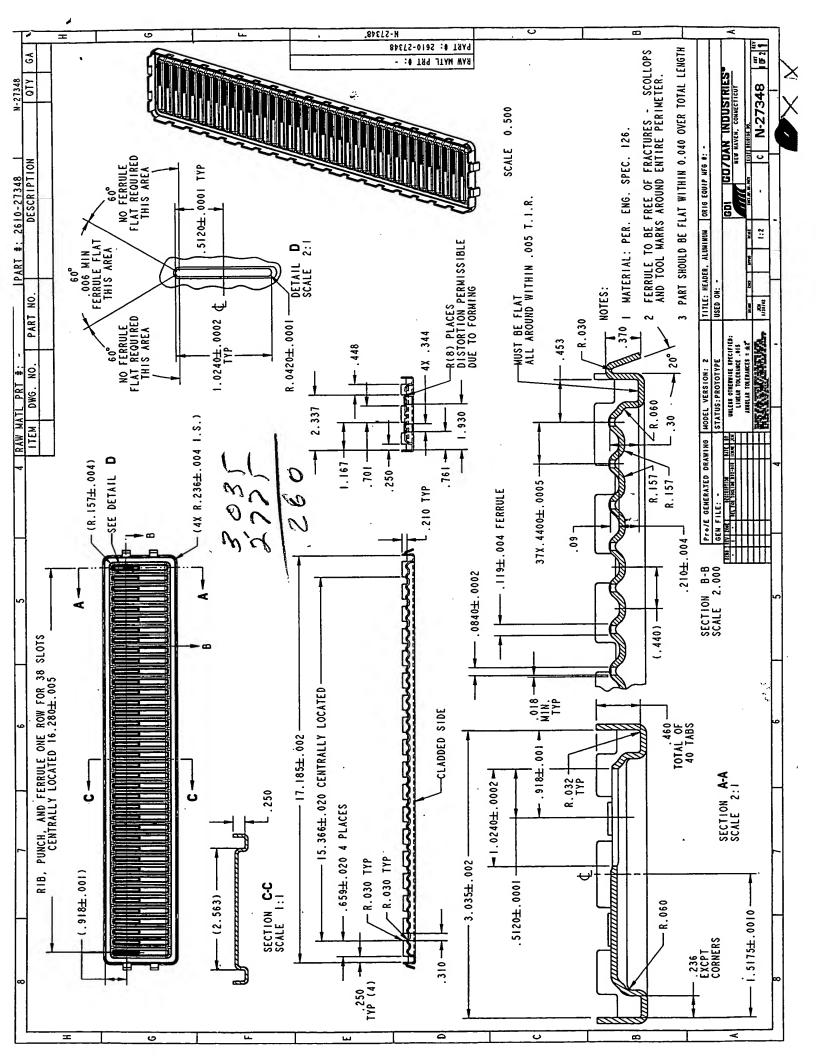
RADIATOR 43 2020 GM



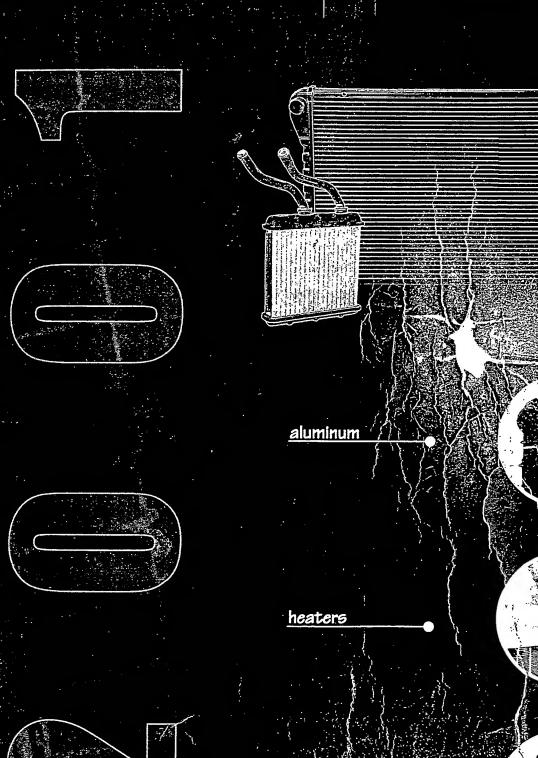
N - 27348

**HEADER** Used in

**RADIATOR 43 2373 FORD** 



# Ready Rad® Ready Aire® heater cores





Core Size: 23% x 15% x 1 1 Row Inlet 2% x 16% Tank Sizes:

Outlet 2% x 16% Hose Fittings: Inlet 15/16 Dia. Top Right Outlet 15/16 Dia. Bot. Left

Oil Cooler 11%" Type Mount: C Eng. & Trans.

Construction: Plastic tanks/Aluminum core

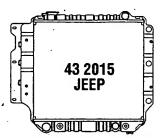


Core Size: 23% x 15% x 1

1 Row Inlet 2% x 16% Tank Sizes:

Outlet 2% x 16%
Hose Fittings: Inlet 15% Dia. Top Right Outlet 1% Dia. Bot. Left

Type Mount: C Oil Cooler 11 Construction: Plastic tanks/Aluminum core Oil Cooler 11% Comments: HRL Connection on RH Tank



Core Size: 18 x 20 x 11/4

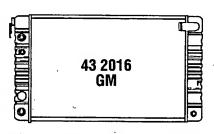
2 Row

Tank Sizes: Inlet 21/4 x 20

Outlet 2½ x 20 Hose Fittings: Inlet 1½ Dia. Top Right

Outlet 11/2 Dia. Bot. Left

Type Mount: FM Oil Cooler 12' Construction: Brass tanks/Copper-Brass core

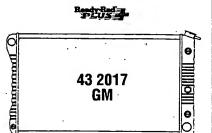


Core Size: 23% x 15% x 1% 3 Row Tank Sizes: Inlet

Inlet 2% x 16% Outlet 2% x 16%

Hose Fittings: Inlet 1% Dia. Top Left Outlet 1% Dia. Bot. Right

Type Mount: C Oil Cooler 111/2" Construction: Brass tanks/Copper-Brass core Comments: Sensor Fitting on LH Tank



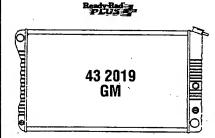
Core Size: 28% x 17 x 1 1 Row 2% x 18% Tank Sizes: Inlet

Outlet 2% x 18%

Hose Fittings: Inlet 1% Dia. Top Left Outlet 1% Dia. Bot. Right

Oil Cooler 111/2" Type Mount: C

Construction: Plastic tanks/Aluminum core Comments: HRL & CLI w/Plugs on RH Tank

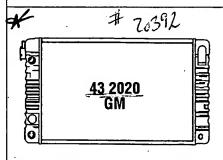


Core Size: 30½ x 17 x 1 1 Row . Tank Sizes: 2% x 18% Inlet Outlet 2% x 18%

Hose Fittings: Inlet 11/16 Dia. Top Left

Outlet 1% Dia. Bot. Right Oil Cooler 111/2" Type Mount: C

4 Plate Construction: Plastic tanks/Aluminum core Comments: HRL & CLI w/Plugs on RH Tank



Core Size: 23% x 15% x 1% 3 Row Inlet 2% x 16% Tank Sizes: Outlet 2% x 161/2

Hose Fittings: Inlet 1% Dia. Top Left Outlet 1% Dia. Bot. Right

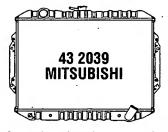
Type Mount: C Oil Cooler 111/2" Construction: Brass tanks/Copper-Brass core



Core Size: 14% x 22% x % 1 Row Tank Sizes: Inlet 1% x 22% Outlet 1% x 22%

Hose Fittings: Inlet 1% Dia. Top Right Outlet 1% Dia. Bot. Left

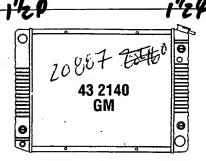
Type Mount: FM Oil Cooler None Construction: Brass tanks/Copper-Brass core Comments: Sensor Fitting on Bottom Tank



Core Size: 16% x 23% x 2 Tank Sizes: Inlet 21/2 x 231/4

Outlet 21/2 x 231/4 Hose Fittings: Inlet 1% Dia. Top Left

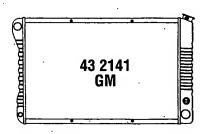
Outlet 1% Dia. Bot. Right Type Mount: FM Oil Cooler 11¾ Construction: Brass tanks/Copper-Brass core Oil Cooler 1134"



3 Row Core Size: 26% x 17 x 1% Inlet 2% x 18% Outlet 2% x 18% 2% x 18% Tank Sizes:

Hose Fittings: Inlet 1% Dia. Top Left Outlet 1% Dia. Bot. Right

Type Mount: C 2 Trans Oil Cooler 111/2" Construction: Brass tanks/Copper-Brass core



Core Size: 26% x 17 x 1 .2 Row Tank Sizes: Inlet 2% x 18%

Outlet 2% x 18% Hose Fittings: Inlet 1% Dia. Top Left Outlet 1% Dia. Bot. Right

Type Mount: C Oil Cooler 111/2" Plate

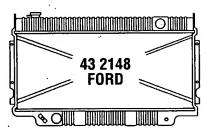
Construction: Brass tanks/Copper-Brass core



Core Size: 22% x 12% x 1% 2 Row Inlet 2 x 13 Outlet 2 x 13 Tank Sizes:

Hose Fittings: Inlet 11/4 Dia. Top Right Outlet 11/4 Dia. Bot. Left

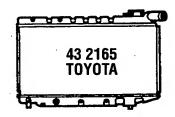
Type Mount: P Oil Cooler None Construction: Brass tanks/Copper-Brass core Comments: Sensor Fitting on LH Tank



Core Size: 151/2 x 37 x 21/4 4 Row Inlet 3½ x 37½ Outlet 3½ x 37½ Tank Sizes:

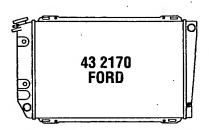
Inlet 134 Dia. Top Right Hose Fittings: Outlet 2 Dia. Bot. Left

Oil Cooler 12" Type Mount: FM Construction: Plastic tanks/Aluminum core



Core Size: 121% x 26% x % 1 Row Inlet 11/4 x 271/4 Tank Sizes: Outlet 11/4 x 271/4 Hose Fittings: Inlet 11/4 Dia. Top Right Outlet 11/4 Dia. Bot. Left

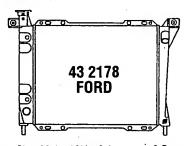
Type Mount: P Oil Cooler None Construction: Plastic tanks/Copper-Brass core



Core Size: 27½ x 18¾ x 1 1 Row Tank Sizes: Inlet 1½ x 18½
Outlet 3 x 18½
Hose Fittings: Inlet 1½ Dia. Top Right

Outlet 1½ Dia. Bot. Left

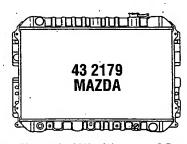
Type Mount: C Oil Cooler 8" Construction: Plastic tanks/Aluminum core



Core Size: 22% x 18% x 2% 2 Row Tank Sizes: Inlet 3 x 181/2 Outlet 3 x 181/2

Hose Fittings: Inlet 11/16 Dia. Top Right Outlet 11/2 Dia. Bot. Left

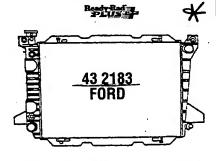
Oil Cooler 12° Type Mount: C Construction: Plastic tanks/Aluminum core



Core Size: 14% x 23% x 1% Tank Sizes: Inlet 1% x 23% 2 Row Outlet 1% x 23%

Hose Fittings: Inlet 1% Dia. Top Left Outlet 1% Dia. Bot. Right

Type Mount: FM Oil Cooler 10% Construction: Brass tanks/Copper-Brass core Comments: Sensor Fitting on Bottom Tank

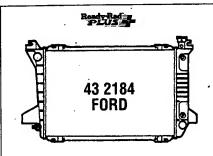


2 Row Core Size: 27% x 18% x 2 Inlet 3 x 18½ Outlet 3 x 18½ Tank Sizes:

Hose Fittings: Inlet 11/4 Dia. Top Right Outlet 1% Dia. Bot. Left

Oil Cooler 12" Type Mount: FM Construction: Plastic tanks/Aluminum core

> 4 row model available see **HEATBUSTER** model 43 6009



Core Size: 27% x 18% x 1% 1 Row Tank Sizes:

Inlet 1% x 18% Outlet 3 x 18%

Hose Fittings: Inlet 11/4 Dia. Top Left Outlet 1% Dia. Bot. Right

Oil Cooler 12" Type Mount: C Construction: Plastic tanks/Aluminum core

Ready Rad 43 2186 **FORD** 

Core Size: 27% x 18% x 1% 1 Row Tank Sizes: Inlet 11/4 x 181/2

Outlet 3 x 181/2

Hose Fittings: Inlet 11/4 Dia. Top Right Outlet 1% Dia. Bot. Left

Oil Cooler 12" Type Mount: C Construction: Plastic tanks/Aluminum core

43 2190 **FORD** 

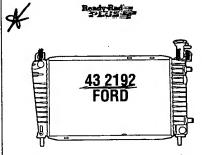
Core Size: 18 x 18% x 1 1 Row Tank Sizes: Inlet 1% x 181/2

Outlet 11/4 x 181/2

Hose Fittings: Inlet 11/16 Dia. Top Right

Outlet 1½ Dia. Bot. Left Type Mount: C Oil Cooler None

Construction: Plastic tanks/Aluminum core



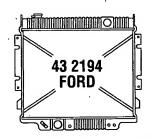
1 Row Core Size: 24 x 14% x 1 Tank Sizes: Inlet 13/4 x 15

Outlet 3 x 15

Hose Fittings: Inlet 1½ Dia. Top Left Qutlet 1½ Dia. Bot. Right

Type Mount: (P1.9) Oil Cooler 10" Construction: Plastic tanks/Aluminum core

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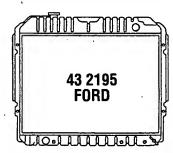


Core Size: 231/2 x 301/2 x 21/4 4 Row

Tank Sizes: Inlet 3½ x 31
Outlet 3½ x 31
Hose Fittings: Inlet 1¾ Dia. Top Right

Outlet 2 Dia. Bot. Left

Oil Cooler 12". Type Mount: FM Construction: Brass tanks/Copper-Brass core

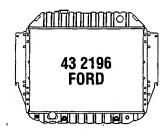


Core Size: 21 x 30% x 1% 3 Row Tank Sizes:

Inlet 3 x 30% Outlet 3 x 30%

Hose Fittings: Inlet 1½ Dia. Top Right Outlet 1¾ Dia. Bot. Left

Type Mount: FM Oil Cooler 12° Construction: Brass tanks/Copper-Brass core



Core Size: 19% x 26% x 2 Tank Sizes: Inlet 3 x 26% 3 Row

Outlet 3 x 26%

Hose Fittings: Inlet 1½ Dia. Top Right

Outlet 1% Dia. Bot. Left

Oil Cooler 12° Type Mount: FM Construction: Brass tanks/Copper-Brass core Comments: w/TOC Adapt., Sensor Fit.

w/Plug Bot.



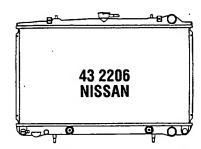
Ready Rad

Core Size: 27% x 18 x 2%

Inlet 3 x 181/2 Tank Sizes: Outlet 3 x 181/2

Hose Fittings: Inlet 11/4 Dia. Top Left

Outlet 1% Dia. Bot. Right Type Mount: FR Oil Cooler 12" Construction: Plastic tanks/Aluminum core



Core Size: 141/4 x 251/4 x 1/8

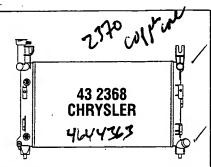
2 Row

1 Row

Tank Sizes: Inlet 1% x 261/4 Outlet 1% x 26%

Hose Fittings: Inlet 1% Dia. Top Right Outlet 1% Dia. Bot. Left

Oil Cooler 11%" Type Mount: Pin Construction: Brass tanks/Copper-Brass core

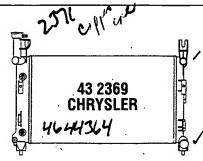


Core Size: 25% x 15% x 1% 2 Row

Inlet 2½ x 15¾ Outlet 2½ x 15¾ Tank Sizes:

Hose Fittings: Inlet 11/4 Dia. Top Right Outlet 11/2 Dia. Bot. Right

Oil Cooler 10" Type Mount: CF/P Construction: Plastic tanks/Aluminum Core

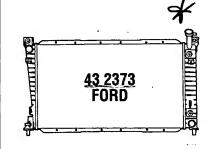


2 Row Core Size: 25% x 15% x 1% Tank Sizes:

Inlet 2½ x 15¾ Outlet 2½ x 15¾

Hose Fittings: Inlet 11/4 Top Right Outlet 11/2 Bot. Let U.S.

Type Mount: CF/P Oil Cooler 10° Construction: Plastic tanks/Aluminum Core



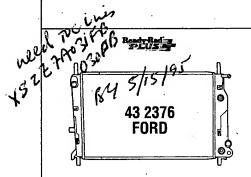
Core Size: 30 x 17 x 1 1 Row

Inlet 2 x 17% Tank Sizes: Outlet 2 x 17%

Hose Fittings: Inlet 11/2 Dia. Top Left Outlet 11/2 Dia. Bot. Right

Oil Cooler 12" Type Mount: FM/P

Construction: Plastic tanks/Aluminum core



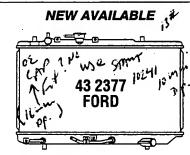
Core Size: 24% x 15% x 1

Inlet 2 x 16 Tank Sizes:

Outlet 3 x 16
Hose Fittings: Inlet 1% Dia. Top Left
Outlet 1% Dia. Bot. Right

1 Row

Oil Cooler 12" Type Mount: P Construction: Plastic tanks/Aluminum core



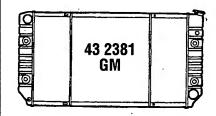
Core Size: 13% x 25% x % 1 Row

Inlet 1% x 26% Tank Sizes: Outlet 2 x 26%

Hose Fittings: Inlet 1½ Dia. Top Left
Outlet 1½ Dia. Bot. Right

Type Mount: P Oil Cooler 10%" Construction: Plastic tanks/Aluminum Core

#### **NEW check for availability**



Core Size: 34 x 18¾ x 2¼

Tank Sizes: Inlet 3½ x 20%
Outlet 3½ x 20%
Hose Fittings: Inlet 1% Dia. Top Left
Outlet 1% Dia. Bot. Right

4 Row

Type Mount: C Eng/Trans Cooler 81/2" Construction: Brass tanks/Copper-Brass core



Core Size: 30½ x 17½ x % Tank Sizes: Inlet 2½ x 18½ 1 Row

Outlet 21/2 x 183/4 Hose Fittings: Inlet 15/15 Dia. Top Left

Outlet 1% Dia. Bot. Right Type Mount: C Oil Cooler 111/2" Construction: Plastic tanks/Aluminum core

#### NEW check for availability

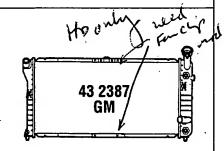


Core Size: 30½ x 15 x 17/6 1 Row

Inlet 2½ x 16% Tank Sizes: Outlet 21/2 x 161/3

Hose Fittings: Inlet 15% Dia. Top Right Outlet 1% Dia. Bot. Left

Type Mount: C Eng/Trans Cooler 11%". Construction: Plastic tanks/Aluminum core

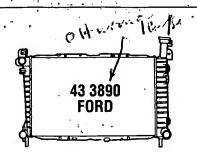


Core Size: 30½ x 15 x 1½ Tank Sizes: Inlet 2½ x 16½

Outlet 21/2 x 161/4

Hose Fittings: Inlet 11/16 Dia. Top Left Outlet 11/16 Dia. Bot. Right

Type Mount: C/P Oil Cooler 111/5" Construction: Plastic tanks/Aluminum core Comments: Sensor Fitting on RH Tank



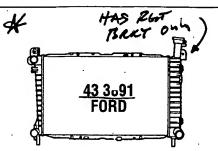
Core Size: 243/16 x 141/2 x 11/4 2 Row Tank Sizes: Inlet 2% x 151/4

Outlet 2% x 151/4

Hose Fittings: Inlet 1½ Dia. Top Left Outlet 11/2 Dia. Bot. Right

Type Mount: C Oil Cooler 10" Construction: Brass tanks/Copper-Brass core



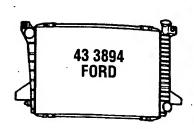


Core Size: 243/16 x 141/2 x 2 2 Row Tank Sizes: Inlet 21/2 x 151/4

Outlet 21/2 x 151/4

Hose Fittings: Inlet 1½ Dia. Top Left Outlet 1½ Dia. Bot. Right

Type Mount: C Oil Cooler 10" Construction: Plastic tanks/Aluminum core



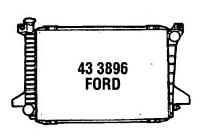
Core Size: 27% x 181/4 x 11/4 2 Row

Inlet 113/6 x 181/2 Tank Sizes: Outlet 11% x 181/2
Hose Fittings: Inlet 11/4 Dia. Top Left

Outlet 1% Dia. Bot. Right

Type Mount: FR Oil Cooler None Construction: Brass tanks/Copper-Brass core Comments: Can Use 43 2184

CAN USE PLUS MODEL 43 2192



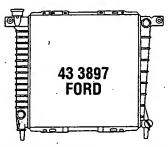
Core Size: 27% s x 18% x 1% 2 Row

Inlet 113/6 x 181/2 Tank Sizes: Outlet 113/6 x 181/2

Hose Fittings: Inlet 1¾ Dia. Top Left

Outlet 11/4 Dia. Bot. Right Type Mount: FR Oil Cooler None

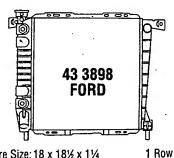
Construction: Brass tanks/Copper-Brass core



Core Size: 18 x 18½ x 1¼ 1 Row

Tank Sizes: Inlet 11% x 181/2
Outlet 27 x 181/2
Hose Fittings: Inlet 11/16 Dia. Top Right Outlet 1½ Dia. Bot. Left

Type Mount: C Oil Cooler None Construction: Plastic tanks/Aluminum core



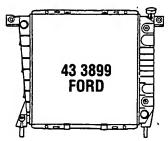
Core Size: 18 x 18½ x 1¼

Tank Sizes: Inlet 11% x 181/2
Outlet 224 x 181/2
Hose Fittings: Inlet 11/6 Dia. Top Right
Outlet 11/2 Dia. Bot. Left

Oil Cooler 12" Type Mount: C Construction: Plastic tanks/Aluminum core

Comments: w/TOC Adapters

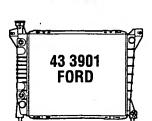




Core Size: 18 x 18½ x 1¼

Tank Sizes: Inlet 1% x 18½
Outlet 3 x 18½
Hose Fittings: Inlet 1% Dia. Top Left Outlet 1½ Dia. Bot. Right

Type Mount: C Oil Cooler 12' Construction: Brass tanks/Copper-Brass core



Resdy Red

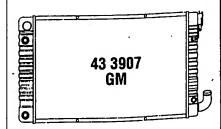
Core Size: 221/2 x 181/4 x 11/4 - 1 Row

Tank Sizes: Inlet 2 x 18%

Outlet 31/4 x 183/6 Hose Fittings: Inlet 11/16 Dia. Top Right Outlet 1½ Dia. Bot. Left

Type Mount: C Oil Cooler 12' Construction: Plastic tanks/Aluminum core

Comments: w/TOC Adapters



Core Size: 23% x 15¼ x 1

1 Row.

Tank Sizes: Inlet 2½ x 16½
Outlet 2½ x 16½
Hose Fittings: Inlet 1⅓ Dia. Top Left Outlet 15/16 Dia. Bot. Right

Oil Cooler 11% Type Mount: C Construction: Plastic Tanks/Aluminum Core

Comments: Sensor Fit. w/Plug, .Push-in Adapt.

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Distributor:







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